DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH GEOLOGICAL SURVEY DIVISION
MICHIGAN DEPARTMENT OF CONSERVATION

OPEN FILE

(MARQUETTE CO. AIRPORT 1:62500) NEGAUNEE 3.5 MI. 2.7 MI. TO U.S. 41 AND MICH. 28

35" 87° 32' 30" 46° 30'

This map is preliminary and has not been edited or reviewed for conformity with U. S. Geological Survey standards and nomenclature.

PRECAMBRIAN

Keweenawan

db
Diabase

Fresh or only slightly altered dark gray dikerock of diabasic composition and texture. Locally, inversely magnetized.

md
Metadiabase and metagabbro

Massive green or green and white rock. Forms tabular intrusive body that gently crosscuts Siamo and Negaunee Formations.

Intrusive contact

an
Negaunee Iron-Formation

Mainly thinly laminated magnetite-chert or magnetite-siderite-chert rock, typically with some minnesotaite. Locally, thin interbeds of graywacke, especially in lower part of formation.

as asi
Siamo Slate

Mainly interbedded dark gray and green gray slates, graywacke, and impure quartzite; typically weathers brown or reddish. asi, iron-bearing member; locally called the Goose Lake Iron Formation; shown in outcrop only. Magnetic, dark green, laminated, chloritic, sideritic slate; in places with cherty interbeds. Weathers to brown, greenish brown, or reddish brown. Approximate position of the iron-bearing member is indicated and shown by a line of short dashes. Estimated thickness of the member is 50 to 100 feet.

Animikie

aa
Ajibik Quartzite

Light gray, reddish, and colorless quartzite; commonly weathers white, dark gray, or dark reddish gray.

aw
Wewe Slate

Mainly dark gray and dark reddish gray slate with interbeds of impure dark-colored quartzite. Locally, brecciated, and impregnated with quartz and specular hematite. Locally conglomerate is abundant, especially near exposures of underlying gneiss

Unconformity

g
Gneiss

Tonalitic and granodioritic rock, locally strongly sheared, sericitized, and impregnated with secondary quartz.

EXPLANATION

Outcrop or outcrop area

Geologic contact; dashed where inferred; queried where position highly uncertain

Inferred fault; queried where existence or position highly uncertain

Anticlinal axis, showing plunge

Synclinal axis, showing plunge

Strike and dip of bedding

Strike of vertical bedding

Horizontal bedding

Strike and dip of overturned bedding

Strike and dip of foliation

Strike of vertical foliation

Strike and dip of joint

Strike of vertical joint

Top direction in crossbedded quartzite

Top direction shown by ripple marks

Test pit, containing evidence of underlying ledgerock

Zone of coarse breccia in metadiabase

• 720
Magnetometer station

Value in gammas of vertical intensity above or below an arbitrary base. Zero datum is approximately 56,800 gammas as determined from magnetic base stations established by Bath (Bath, G. D., 1951, Magnetic base stations in the Lake Superior iron districts: U. S. Bur. Mines Rept. Inv. 4804). Survey made with Jalander magnetometer

Magnetic contours

Labeled in thousands of gammas

Contour interval is 2,000 gammas between -10,000 and 10,000 gammas and 10,000 gammas above 10,000 gammas. Incomplete magnetic data—mainly in western part of map area—, isolated apparent abnormal values, and some negative values are not contoured. Magnetic depressions, some of which are assumed to close outside of the surveyed area, are shown by hachure contours

[1] By mining geologists.

R. 26 W.

T. 47 N.

GEOLOGIC AND MAGNETIC SURVEY OF A PART OF THE PALMER 7½-MINUTE QUADRANGLE, MICHIGAN

Geology by J. E. Gair, 1961 and 1962
Magnetic survey by K. L. Wier, 1963

0 1000 2000 3000 4000 Feet